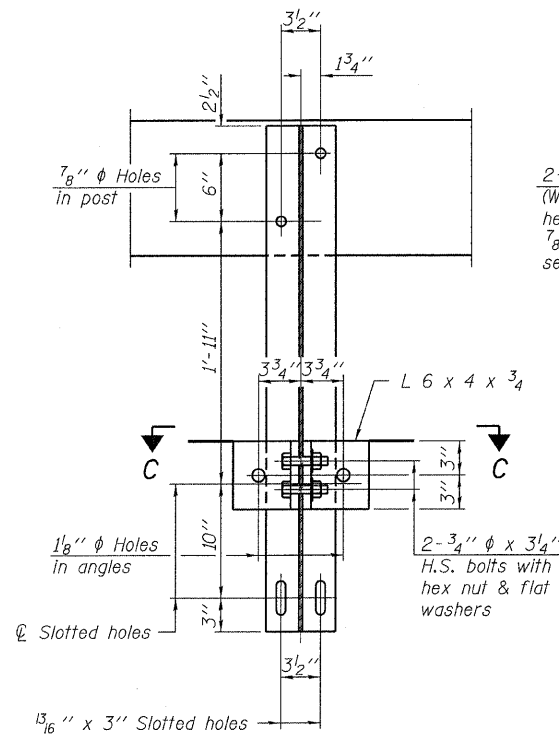
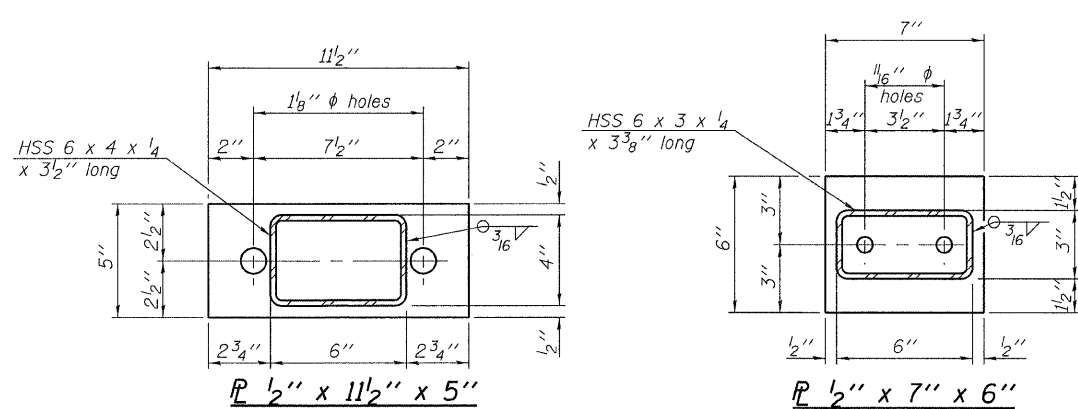
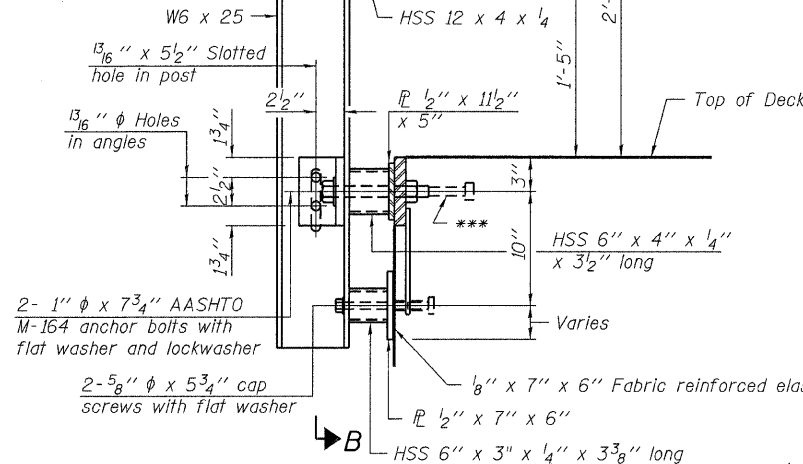


VIEW A-A
ROUND HEAD BOLT



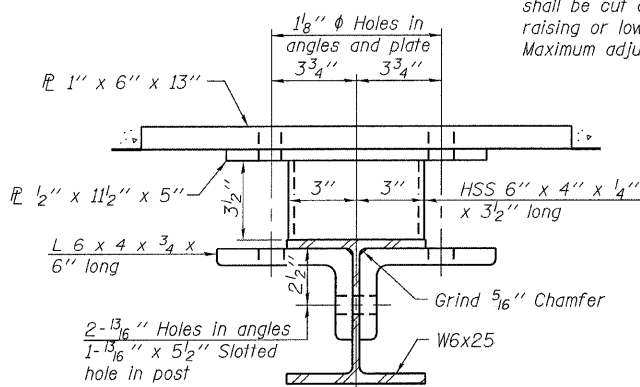
SECTION B-B

2-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.

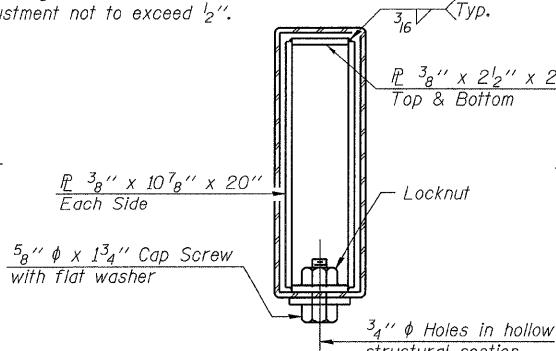


SECTION AT RAILING POST

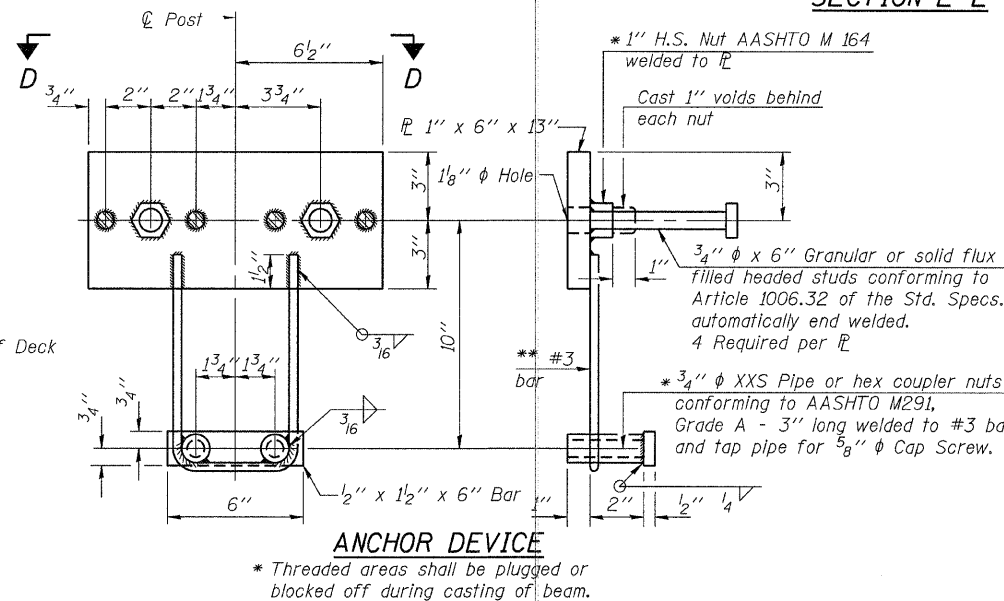
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



SECTION C-C

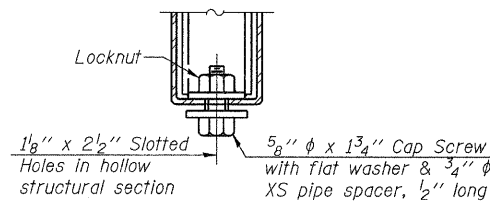


SECTIONS AT RAIL SPLICE

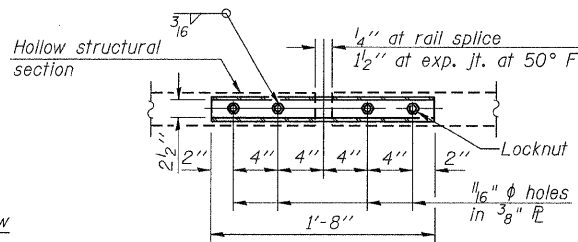


ANCHOR DEVICE

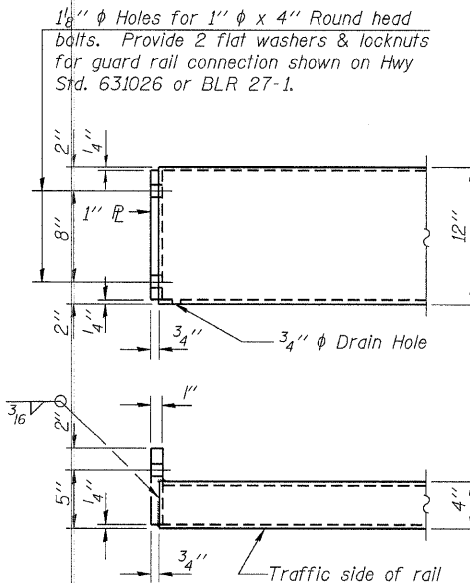
* Threaded areas shall be plugged or blocked off during casting of beam.



RAIL SPLICE CONNECTION AT EXPANSION JT.

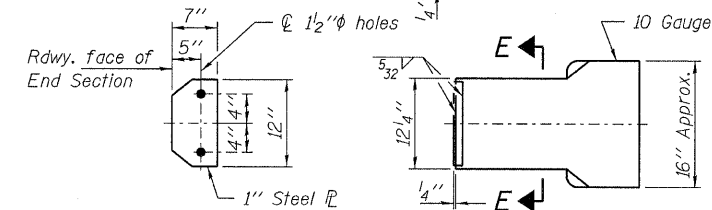


PLAN-BOTT. SPLICE PL TYPICAL



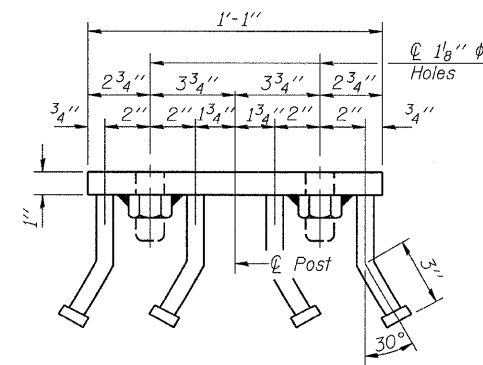
END OF RAIL DETAILS

Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



SECTION E-E CURLED END SECTION DETAILS

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	88

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

FILE NAME = 100323-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
2045 STEVENSON DRIVE, SUITE 201		DRAWN - D.A.B.	REVISED -
SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT DATE = 3/2/2011		
LS / PE / SE CORP.			

STATE OF ILLINOIS
VERMILION COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 092-3517

SHEET NO. 6 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
78	09-14138-00-BR	VERMILION	27	24
OAKWOOD ROAD DISTRICT		CONTRACT NO. 91458		
ILLINOIS FED. AID PROJECT				